

## Abstract

The present invention concerns a process and an apparatus for continuous polymerisation of olefin monomers in a cascade of polymerisation reactors. According to the process, an olefin monomer is polymerised first in slurry phase in an inert hydrocarbon diluent in at least one loop reactor and then, subsequently, in gas phase in at least one gas phase reactor. According to the invention, a polymer slurry is continuously withdrawn from the loop reactor and optionally concentrated. The concentrated slurry is conducted to a high pressure flash unit in order to remove the remaining fluid phase, and fed to the gas phase reactor. With the process described in this invention, it is possible to produce bimodal polyethylene with good properties. The operation of the process is stable because of the truly continuous operation.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number  
WO 2004/039847 A1

(51) International Patent Classification<sup>7</sup>: C08F 2/14, 2/34,  
10/00, 297/08 // B01J 19/24

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(21) International Application Number:  
PCT/FI2003/000799

(22) International Filing Date: 27 October 2003 (27.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
02396161.8 30 October 2002 (30.10.2002) EP

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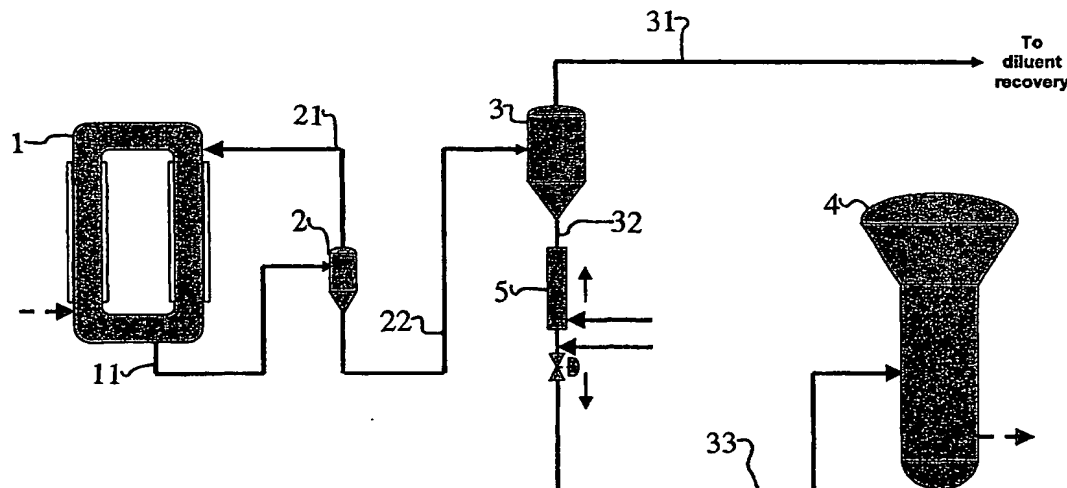
(81) Designated States (national): AE, AG, AL, AM, AT (util-  
ity model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,  
CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (util-  
ity model), DE, DK (utility model), DK, DM, DZ, EC, EE  
(utility model), EE, EG, ES, FI (utility model), FI, GB, GD,  
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,  
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT (utility  
model), PT, RO, RU, SC, SD, SE, SG, SK (utility model),  
SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,  
VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:  
— with international search report

[Continued on next page]

(54) Title: PROCESS AND APPARATUS FOR PRODUCING OLEFIN POLYMERS



(57) Abstract: The present invention concerns a process and an apparatus for continuous polymerisation of olefin monomers in a cascade of polymerisation reactors. According to the process, an olefin monomer is polymerised first in slurry phase in an inert hydrocarbon diluent in at least one loop reactor and then, subsequently, in gas phase in at least one gas phase reactor. According to the invention, a polymer slurry is continuously withdrawn from the loop reactor and optionally concentrated. The concentrated slurry is conducted to a high pressure flash unit in order to remove the remaining fluid phase, and fed to the gas phase reactor. With the process described in this invention, it is possible to produce bimodal polyethylene with good properties. The operation of the process is stable because of the truly continuous operation.

WO 2004/039847 A1